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ENVIRONMENTAL IMPACT STATEMENT

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Pursuant to: Montana Environmental Policy Act
Section 69-6504 (b) (3)

Project No. FG-16

Fishery Development of Lake Koocanusa Tributaries
Canyon, Murray, Barron, Bristow, Jackson, Sutton, and Cripple Horse Creeks

May 2, 1972

Prepared by

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Fisheries Division
Helena, Montana

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Canyon, Murray, Barron, Bristow, Jackson, Sutton, and Cripple Horse Creeks

Environmental Impact Statement

I. Purpose of Projects.

The purpose of these projects is the development of seven streams to realize their full potential for game fish reproduction. The abundance of game fish in Lake Koocanusa (Libby Reservoir) will be dependent upon the rate of utilization of existing tributary streams for game fish reproduction.

II. Description of the Development Projects.

Lake Koocanusa is a man-made reservoir inundating about 90 miles of the Kootenai River Valley. The Montana portion of this reservoir has a surface area of 28,000 acres when full and about 27,000 acres of low pool. At full pool the reservoir extends into British Columbia 42 miles and has a surface area of about 21,000 acres and at low pool the Canadian portion is comprised of mud-flats. Full pool elevation is 2,459 feet MSL and low pool is 2,287 feet MSL.

Maintenance of a game fish population in Lake Koocanusa must primarily rely upon continual stocking the reservoir with hatchery-reared fish. Streams tributary to the reservoir are scarce and generally not well suited to salmonid reproduction. Every stream suitable for spawning should be developed to realize the full potential for naturally reared fish. Almost all streams tributary to the reservoir have been surveyed and their potential as spawning and rearing streams determined. Value of streams have been divided into three principle categories and include: (1) those streams most valuable as spawning and rearing areas for adfluvial westslope cutthroat trout (Salmo clarkii subsp); (2) those streams with some value for spawning and rearing by cutthroat trout but with greater value for other species such as mountain whitefish (Prosopium williamsoni); and (3) those streams with no value for spring spawning fish such as the cutthroat but with value for fall spawners such as the mountain whitefish.

The proposed development for each creek or group of creeks is listed below:

1. Canyon, Murray, Barron, Bristow and Jackson Creeks - Physical surveys conducted by Montana Fish and Game Department in 1967-70 have indicated that the total overall worth of these streams will be low. At fall flows these streams could have higher value for fall spawning game fish. Development work includes removal of 80 to 85 barriers (trash jams and inactive beaver dams) preventing upstream movement of fall spawning fish (whitefish) and assisting establishment of spawning stocks of whitefish by egg or fry plantings.

Mountain whitefish is the most numerous fish present in the Kootenai River prior to impoundment. The survival of this species in Lake Koocanusa is contingent upon their re-establishing spawning grounds lost through inundation of the river.

2. Sutton Creek - This drainage is short and the upper reaches are stairstep beaver dams. The lower two to three miles should provide room for some successful spawning by westslope cutthroat trout and good numbers of whitefish. Work proposed

for this stream includes removal of 5-10 barriers (trash jams and inactive beaver dams) up to the concentration of active beaver dams. Cutthroat trout fingerlings and whitefish eggs or fry will be planted.

3. Cripple Horse Creek - This stream is long but the upper end is stairstep inactive and active beaver dams. A two-mile long section in the middle part of the drainage goes dry each summer, but the lower two miles immediately above reservoir full pool flows throughout the year. A 20-foot high falls is present below full pool that will stop all spring spawning fish from entering the stream when pool levels are below this falls. This falls will be above reservoir water level about 90 percent of the time when spring spawning fish are attempting to move upstream to spawn.

Development of Cripple Horse Creek will be for fall spawning game fish only. Proposed work includes removal of 5-10 barriers (trash jams and inactive beaver dams) which prevent upstream movement of fish and planting whitefish eggs or fry.

The proposed development work for all streams is scheduled for summer and fall of 1972. The funding of the work will be by the Corps of Engineers and work will be done by Montana Fish and Game Department personnel. Removal of barriers will be done by hand tools and chain saws. Some long-term maintenance work is anticipated to insure free upstream fish movement.

III. Description of Existing Environment

A. Human resources involved include reports of a few fishermen for Barron and Cripple Horse Creeks. The 1968 statewide fishing survey gives a point estimate for angler use on Barron Creek of 186 man-days and 12 man-days on Cripple Horse Creek. Angler use is not listed for the remaining five streams. Fishing pressure applied to Barron Creek was mostly from residents of the Warland area. These people have been moved from the area as Warland is now inundated by Lake Koocanusa.

B. Physiography and Geology - Elevations of the watersheds generally range from 2,200 to 6,000 feet. Stream valleys are typical V-shaped canyons bordered by steep-sloped mountains. The slopes are heavily timbered. Murray Creek is a spring-fed stream about 1,000 feet long and originates about 50 feet above the full pool elevation of Lake Koocanusa.

C. Land Use - Murray Creek flows through privately-owned land to the Libby project boundary. The entire lengths of the other streams flow through Kootenai National Forest land to project boundaries. The principle land use is timber production. Limited domestic grazing is done on forest land in the Cripple Horse and Canyon Creek drainages.

D. Fish and Wildlife - Wildlife includes the usual species associated with Northwestern Montana. Beaver are numerous in the upper reaches of Sutton and Cripple Horse Creeks. No attempt will be made to remove beaver dams or beaver from these drainages as development measures are only planned for the stream below the beaver workings. All streams are populated with rainbow, brook and cutthroat trout either as single species or in combination. Average size of adult fish in any stream is generally less than six inches and too small to attract any significant angler use.

E. Vegetative Resources - Riparian vegetation is abundant along all the streams and includes grasses, sedges, willows, alders and conifers.

F. Climate - The climate is typical of northwestern Montana with the exception of Murray Creek. Murray Creek flows within the Tobacco Valley micro-climate which is somewhat warmer and drier. Precipitation in the area varies from 30 inches to 60 inches each year depending upon elevation.

IV. Evaluation of Environmental Impact

A. Impact of Proposed Action - The development of these seven spawning streams used by fish living in Lake Koocanusa should have a beneficial effect upon both the reservoir and stream. Angler opportunity should be increased in the reservoir and in each of the streams. Presence of reservoir fish in streams will provide angler opportunity for larger fish than now exists.

B. Unavoidable Effects of the Proposed Development - Removal of barriers will reduce the quality of the fish habitat somewhat. Introduction of spawning runs of fish from Lake Koocanusa will have a depressing effect upon the resident fish populations. Likely this effect will take place in time without any development since it is considered that spawning runs of game and non-game fish will eventually develop. The development project will speed up the process and may reduce chances of non-game fish intrusion into the streams.

C. Alternatives - Alternatives to this proposal include: (1) perform no development work and (2) eliminate either barrier removal or fish planting. The potential effects of item I are discussed in the above. Elimination of either phase of the proposed development work will diminish the beneficial contribution in fishing which these streams can make to reservoir and stream angling.

D. Short-Term - Long-Term - The establishment of spawning runs of game fish into these streams will have both long and short-term benefits.

E. Irreversible and Irretrievable Commitment of the Resource - It is proposed that only two methods are available to retain these streams in the condition existing before creation of Lake Koocanusa. One would be to prevent the filling of the reservoir. The other would be to construct a fish barrier near the mouth of the stream to prevent encroachment of fish into the streams. With the proposed development, it would be possible to return the streams to their pre-impoundment condition. Natural forces would restore barriers and blocking the stream to spawning fish would soon eliminate this fish population. The original species could be replaced by stocking.

F. Discussion of Problems and Objectives by Other Agencies or the Public - No problem with other agencies is anticipated. The Corps of Engineers will fund the development of these streams. The Forest Service has agreed in principle to the program of stream development of the Lake Koocanusa project. Little opposition from the public at large is expected since it can be shown that the development will likely increase their angling enjoyment.

A copy of this Impact Statement will be attached to a Special Use Permit application to be submitted to Kootenai National Forest for channel clearance activities.

V. Benefits.

The benefits from this project will be improved natural reproduction for game fish populations in Lake Koocanusa. Such improved reproduction should allow the lake to support more angler-days sooner than it could if this project were not done.

VI. A Summary Statement.

Approximately 100 barriers (trash jams and inactive beaver dams) will be removed from seven tributaries of Lake Koocanusa. Removal will be by use of chain saws and hand tools. Some maintenance work may be necessary in subsequent years to maintain access for spawning runs into these tributaries.

VII. A List of Mailing Distribution.

✓ U. S. Forest Service
✓ Dept. of Planning & Economic Development
✓ Dept. of Natural Resources
✓ Trout Unlimited
✓ Montana Wildlife Federation
✓ Environmental Quality Council
✓ Governor's Office
✓ Students Environmental Research Center
✓ District Fisheries Managers
✓ Joe Huston